

**Commonwealth of Kentucky
Division for Air Quality**

PERMIT STATEMENT OF BASIS

Significant Revision Issued Under 401 KAR 52:020

VS-03-004 (Revision 1)

AIR PRODUCTS AND CHEMICALS, INC.

CALVERT CITY, KENTUCKY 42029

April 25, 2003

REVIEWER: JOSHUA J. HIGGINS

Plant I.D. # 21-157-00009

Application Log # 55667

SOURCE DESCRIPTION:

APCI operates a 26 MW Cogeneration "Support Facility" to provide steam, electricity, and operating air to the adjacent chemical plant. The Cogen plant consists of a natural gas-fired turbine and two natural gas-fired heat recovery steam generators (HRSG). The facility is currently under review for a source wide Title V Operating Permit.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements.

At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.

APPLICATION COMMENTS:

I. Significant Revision, Log # 55590

II. Significant Revision, Log # 55667

I. Significant Revision, Log # 55590

COMMENTS:

This permit application is for the installation and operation of one 85.9 mmBtu/hr rental boiler to temporarily supplement the steam production from the heat recovery steam generators (HRSG) during a scheduled maintenance outage.

- a. Types of control and efficiency: Low NO_x burners.
- b. Emission factors and their source:
AP-42 emission factors were used to estimate emissions, see application for details.
- c. Applicable regulations:
The following regulations apply to this project:
 - i. 401 KAR 59:005, General provisions.
 - ii. 401 KAR 59:015, New indirect heat exchangers constructed on or after April 9, 1972.
 - iii. 401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Dc, Standards of performance for industrial-commercial-institutional steam generating units with a heat input capacity of 29 MW (100 mmBtu/hr) or less and 2.9 MW (10 mmBtu/hr) or greater which commenced construction, modification, or reconstruction after June 9, 1989.
- d. Anything unusual about the:
Permit preparation and processing – The source's request to construct is not a modification described under Section 2-III.1)-6) of the *Cabinet Provisions and Procedures for Issuing Title V Permits*, therefore the procedures outlined in Section 2-III.7) were followed. The source is required to obtain a Title V operating permit, but their application for a source wide permit is scheduled for review and processing at a later date. The application was not considered a minor revision because the request to construct and operate the temporary boiler involved significant changes in monitoring and recordkeeping requirements. Therefore, this significant revision is being issued as a "VS" permit.

EMISSION AND OPERATING CAPS DESCRIPTION:

As per the application, operation of the temporary rental boiler is limited to 13 consecutive weeks from the date of start up, and only to be used during periods of maintenance outages of the heat recovery steam generators (HRSG).

PERIODIC MONITORING:

The permittee shall determine the heating value of natural gas once during the operational period of this boiler. The analysis may be performed by the permittee, a service contractor retained by the permittee, the fuel vendor, or any other qualified agency. The permittee shall conduct Reference Method 9 performance tests (with a 6-minute average of 24 observations) during natural gas combustion to determine the opacity of stack emissions as requested by the division, but is assumed to be in compliance at all times that only natural gas is combusted.

PUBLIC AND U.S. EPA REVIEW:

As per the instructions in Section 2-III.7) of the *Cabinet Provisions and Procedures for Issuing Title V Permits*, Public and U.S. EPA review is not required.

II. Significant Revision, Log # 55667

COMMENTS:

The VS-03-004 permit authorized the installation and operation of one 85.9 mmBtu/hr rental boiler to temporarily supplement the steam production from the Heat Recovery Steam Generators (HRSGs) during a scheduled maintenance outage.

This permit application was submitted in order to revise the allowable operating conditions for the rental boiler. By revising the operating limitations, the facility will be allowed to operate the rental boiler while the HRSGs are still running.

Types of control and efficiency, emission factors and their source, applicable regulations, and unusual aspects of the permit preparation and processing are all the same as above.

EMISSION AND OPERATING CAPS DESCRIPTION:

With this application and revision, the operating limitation restricting operation of the temporary rental boiler to periods of maintenance outages of the HRSGs is removed, but the total heat input of the two HRSGs plus the rental boiler is still limited to 620 mmBtu/hr as per F-99-004.

PERIODIC MONITORING:

Same as above.

PUBLIC AND U.S. EPA REVIEW:

As per the instructions in Section 2-III.7) of the *Cabinet Provisions and Procedures for Issuing Title V Permits*, Public and U.S. EPA review is not required.